

Remarks

Claims 1 and 2 have been amended to clarify the claimed invention. Claim 1 has been amended to clarify that E1 and E2 catalyze successive reactions in a PHA biosynthetic pathway. Support for the amendment is found, for example, at page 5, lines 2-7; page 7, lines 10-15. Claim 1 also has been amended to refer to a singular protein fusion, to clarify that the group of formulas includes E1-L_n-E2 *and* E2-L_n-E1, and to clarify, using proper Markush language, that E1 and E2 are *each* selected from the group *consisting of* β -ketothiolases, acyl-CoA reductases, PHA synthases, PHB synthases, phasins, enoyl-CoA hydratases, and beta-hydroxyacyl-ACP::coenzyme-A transferase.

Claims 2 has been amended to clarify that it is *E1 and E2* which are selected from the group consisting of beta-ketothiolase (phbA) and acyl-CoA reductase (phbB); phbB and phbA; PHA synthase (phaC) and phasin (phaP); phaP and phaC (1D); phaC and beta-hydroxyacyl-ACP::coenzyme-A transferase (phbG); phbG and phaC; phaC and enoyl-CoA hydratases (phaJ); and phaJ and phaC.

Claims 7-14 have been canceled and will be pursued in one or more divisional applications. No new matter has been added.

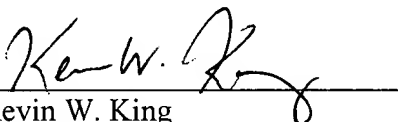
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RESPONSE TO RESTRICTION REQUIREMENT
AND SPECIES ELECTION REQUIREMENT
AND PRELIMINARY AMENDMENT



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Applicants respectfully request examination and allowance of claims 1-6 as amended herein.

Respectfully submitted,



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APPENDIX

Claims as Preliminarily Amended

1. (Once amended) [Protein fusions] A protein fusion having a formula selected from the group consisting of E1-L_n-E2 [or] and E2-L_n-E1, wherein E1 and E2 catalyze successive reactions in a PHA biosynthetic pathway and are each selected from the group [comprising] consisting of β -ketothiolases, acyl-CoA reductases, PHA synthases, PHB synthases, phasins, enoyl-CoA hydratases, and beta-hydroxyacyl-ACP::coenzyme-A transferase, in which linker L_n is a peptide of n amino acids that link E1 to E2 or E2 to E1.

2. (Once amended) The fusion of claim 1 wherein E1 and E2 are selected from the group consisting of beta-ketothiolase (phbA) and acyl-CoA reductase (phbB); phbB and phbA; PHA synthase (phaC) and phasin (phaP); phaP and phaC (1D); phaC and beta-hydroxyacyl-ACP::coenzyme-A transferase (phbG); phbG and phaC; phaC and enoyl-CoA hydratases (phaJ); and phaJ and phaC.

3. The fusion of claim 1 wherein n in the linker is between zero and 50 amino acids.

4. The fusion of claim 1 wherein the linker is glycine-serine.

5. The fusion of claim 1 expressed in a plant.

6. The fusion of claim 1 expressed in a bacteria.

7-14. (Canceled).